

Listing of the Claims

1-7 (Canceled)

1 8. (Currently Amended) A computer implemented best indicator adaptive (BIA) method for
2 demand forecasting comprising the steps of:

3 computer-implemented implementing a plurality of forecasting subsystems which make
4 use of indicators Load (L), Ship (S) and Customer Acceptances (CA) history (CA_{hist});

5 computer-implemented generating a forecast (CA_L) from Load (L) by modeling the ratio
6 of quarter-to-date load to quarter CA actual as a random variable with gamma distribution so that
7 the CA becomes a variable with generalized gamma distribution and computing the sample mean
8 and sigma of the quarter-to-date load to quarter CA actual ~~Load-to-CA~~ ratio for a final forecasted
9 CA_L demand;

10 computer-implemented generating a forecast (CA_S) from Ship (S) by modeling the ratio
11 of quarter-to-date ship to quarter CA actual as a random variable with gamma distribution so that
12 the CA becomes a variable with generalized gamma distribution and computing the sample mean
13 and sigma of the ~~Ship-to-CA~~ quarter-to-date ship to quarter CA actual ratio for a final forecasted
14 CA_S demand;

15 computer-implemented generating a forecast (CA_{LS}) from Load and Ship (LS) by
16 forecasting Customer Acceptances (CA) based on Load (L), Ship (S) and Customer Acceptances
17 history (CA_{hist}) to generate CA_{LS} by estimating the functional relationship and the parameters
18 relating the two ratios ~~Load-to-CA~~ quarter-to-date load to quarter CA actual and ~~Ship-to-CA~~
19 quarter-to-date ship to quarter CA actual;

20 computer-implemented generating a forecast from Customer Acceptances history (CA_{hist});

21 computer-implemented refining the forecasts based on distribution demand using
22 Customer Requested Date (CRAD) by

23 generating a forecast from Load (L) and CRAD as $CA_{L,CRAD}$,

24 generating a forecast from Ship (S) and CRAD as $CA_{S,CRAD}$, and

25 generating a forecast from Load (L) and Ship (S) and CRAD as $CA_{LS,CRAD}$;

for each forecast CA_L , CA_S , CA_{LS} , $CA_{L,CRAD}$, $CA_{S,CRAD}$, $CA_{LS,CRAD}$, and CA_{hist} , determining a forecast error;

computer-implemented eliminating CA_{LS} and $CA_{LS,CRAD}$ if data is for a historical period shorter than a predetermined period;

for all remaining forecasts, selecting a the forecast having a the forecast error that is the smallest error; and

outputting a the selected forecast as an optimum forecast.

9. (Currently Amended) A computer implemented best indicator adaptive (BIA) method for demand forecasting comprising the steps of:

inputting Load (L), Ship (S) and Customer Acceptances (CA) quarterly history (CA_{hist}) data;

computer-implemented implementing a plurality of forecasting subsystems making use of four sources of information, Load (L), Ship (S), Customer Acceptances quarterly history (CA_{hist}), and Customer Request Date (CRAD);

computer-implemented forecasting Customer Acceptances (CA) based on Load (L) to generate CA_L by modeling a ratio of quarter-to-date load to quarter CA actual as a random variable with gamma distribution so that the CA becomes a variable with generalized gamma distribution whose mean and sigma ~~can be~~ are easily computed from the sample mean and sigma of the ~~Load-to-CA~~ quarter-to-date load to quarter CA actual ratio;

computer-implemented forecasting Customer Acceptances (CA) based on Ship (S) to generate CA_S by modeling the ratio of quarter-to-date ship to quarter CA actual as a random variable with gamma distribution so that the CA becomes a variable with generalized gamma distribution whose mean and sigma ~~can be~~ are easily computed from the sample mean and sigma of the ~~Ship-to-CA~~ quarter-to-date ship to quarter CA actual ratio;

computer-implemented forecasting Customer Acceptances (CA) based on Load (L), Ship (S) and Customer Acceptances history (CA_{hist}) to generate CA_{LS} by estimating the functional relationship and the parameters relating the two ratios ~~Load-to-CA~~ quarter-to-date load to quarter CA actual and ~~Ship-to-CA~~ quarter-to-date ship to quarter CA actual;

22 computer-implemented using a log mean to sigma ratio of CRAD distribution, adjusting
23 the forecasts CA_L , CA_S and CA_{LS} to arrive at more accurate forecasts $CA_{L,CRAD}$, $CA_{S,CRAD}$, and
24 $CA_{LS,CRAD}$;
25 computer-implemented for each forecast CA_L , CA_S , CA_{LS} , $CA_{L,CRAD}$, $CA_{S,CRAD}$, $CA_{LS,CRAD}$,
26 and CA_{hist} , determining a forecast error;
27 computer-implemented eliminating CA_{LS} and $CA_{LS,CRAD}$ if data is for a historical period
28 shorter than a predetermined period;
29 eliminating any other forecast due to expert knowledge;
30 for all remaining forecasts, selecting a the forecast having a the forecast error that is the
31 smallest error; and
32 outputting a the selected forecast as an optimum forecast.